

CLAIMS

1. A Coriolis flowmeter characterized by comprising:

at least one flow tube constructed of a bent tube of a symmetrical shape with respect to a first axis and supported at both ends by a support portion having inflow and outflow ports;

a drive device for alternately driving the flow tube in a rotating direction around a second axis connecting positions supported by the support portion at the both ends; and

a pair of vibration detecting sensors mounted at symmetrical positions to right and left of the drive device, for detecting a vibration having a phase difference that is proportional to Coriolis forces acting on the flow tube, characterized in that:

the drive device is provided in the first axis, and a pair of second drive devices for alternately driving the flow tube in the rotating direction are further provided and are arranged at symmetrical positions to the right and left of the drive device; and

the pair of second drive devices are driven in phase with each other, with the drive device and the pair of second drive devices being driven in a reverse phase with each other.

2. A Coriolis flowmeter according to Claim 1, characterized in that the pair of vibration detecting sensors are arranged between

the drive device and the pair of second drive devices.

3. A Coriolis flowmeter according to Claim 1, characterized in that the pair of vibration detecting sensors are arranged between the second drive device and the support portion having the inflow and outflow ports.

4. A Coriolis flowmeter according to any one of Claims 1 through 3, characterized in that the flow tube is formed in a gate-shape having a straight portion and a pair of leg portions connected to the both ends of the straight portion, and the drive device and the pair of second drive devices are arranged along the straight portion.

5. A Coriolis flowmeter according to any one of Claims 1 through 4, characterized in that each of the pair of vibration detecting sensors is equipped with a coil and a magnet, the coil is provided on a stationary member parallel to the flow tube, and the magnet is provided on the flow tube.